

Printer Specifications

Printing

Print method: 9-pin impact dot matrix

Print speed:

Quality	Pitch	Characters/second/line
Draft	10	220
	12	264
NLQ	10	45
	12	54

Printing direction: Bidirectional logic-seeking for text
unidirectional for graphics

Line spacing: 1/6" or 1/8" or programmable in increments of 1/216th of an inch

Paper feed speed: Single sheet: 48 ms/line (3.6" per sec)
Continuous: 53 ms/line (3.0" per sec)

Printable columns:

Character pitch	Maximum printed characters	
	FX-850	FX-1050
10 pitch	80	136
10 pitch condensed	137	233
12 pitch	96	163
12 pitch condensed	160	272

Buffer: 8 Kbyte

Character fonts:

Draft
NLQ Epson Roman
Epson Sans Serif

Interfaces

The Epson interfaces that are compatible with the FX-850 and FX-1050 are listed below.

Interface number	Name
#8143	RS-232 C/current loop interface
#8148	Intelligent serial interface
#8149	32Kbyte buffer serial interface
#8165	Intelligent IEEE-488 interface
#8172	32 Kbyte buffer parallel interface

Paper feeding methods: Friction
Push tractor
Cut sheet feeder (optional)
Pull tractor (optional)

Ribbon: Cartridge ribbon, available in black only:
#8750 (FX-850)
#8755(M) (FX-1050)

Life expectancy of ribbon: 3 million characters (14 dots/character)

MCBF: For all components excluding print head:
5 million lines

MTBF: **FX 850** 4000 power-on hours
FX-1050 6000 power-on hours

Print head life: 100 million characters (14 dots/character)

Dimensions and weight:

	FX-850	FX-1050
Height:	5.9"	5.9"
Width:	17.9"	24.8"
Depth:	14.2"	14.2"
Weight:	20.9 lbs	27.5 lbs

Voltage: 120 VAC ± 10%

Power consumption: 120 watts maximum

Frequency: 49.5 to 60.5 Hz

Insulation resistance: 10M ohms between AC power line and chassis

Dielectric strength (between AC line and chassis):

Can withstand 1.0 KV rms applied for one minute or 1250 VAC rms applied for one second.

Temperature:

Operation: 40°F to 95°F (5°C to 35°C)
Storage: -22°F to 140°F (-30°C to 60°C)

Characters:

96 standard ASCII character set
(including italic characters)
13 international character sets
Epson Extended Graphics characters set

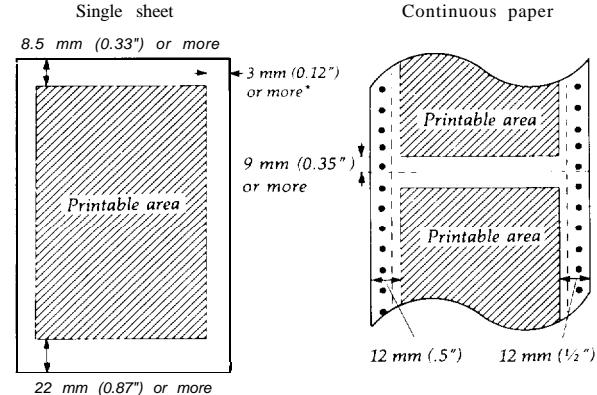
Paper width:

Paper Sheet	FX-850	FX-1050
Single Sheet	7.2 to 10.1" (182-257mm)	7.2 to 14.4" (162-366mm)
Continuous	4 to 10" (101-254 mm)	4 to 16" (101-406.4 mm)
Envelopes	6.5" or 9.5"	6.5" or 9.5'
Labels	2.5" or 4.0"	2.5" or 4.0"

Paper Length: Single sheet

7.2 to 14.3 inches (182 to 364 mm)

Printable area:



Number of copies:

Up to 4 sheets including the original. Total thickness must not exceed 0.012" (0.32 mm)

FX - 850/1050 DOT - MATRIX PRINTER

Humidity:	Operation: 10% to 80% (without condensation) Storage: 5% to 85% (without condensation)
Shock:	Operation: Up to 1 G within 1 ms Storage: Up to 2 G within 7 ms
Vibration:	Operation: Up to 0.25 G at up to 55 Hz Storage: up to 0.50 G at up to 55 Hz

SelectType

You can use the SelectType control panel to choose fonts, pitches, and condensed printing. The settings you select using the SelectType panel remain valid even after the printer is turned off, reset, or initialized. However, commands from your software application program temporarily override the SelectType settings.

Character fonts

The FX-850 and FX-1050 have three built-in character fonts:

DRAFT

```
'"##$%&'(*+,-.0123456789;:<=>?@ABCDEFGHIJK
LMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{}~'
```

We've just seen your excellent ad for miniature zebras in a recent back issue of Trader's Times. What is the price of these items for quantities of more than one gross?

ROMAN

```
'"##$%&'(*+,-.0123456789;:<=>?@ABCDEFGHIJK
LMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{}~'
```

We've just seen your excellent ad for miniature zebras in a recent back issue of Trader Times. What is the price of these items for quantities of more than one gross?

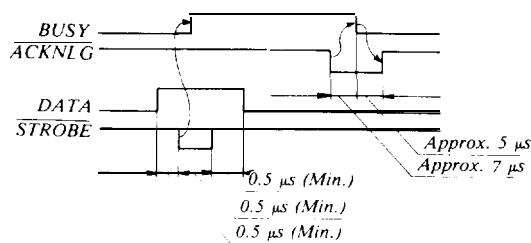
SANS SERIF

```
'"##$%&'(*+,-.0123456789;:<=>?@ABCDEFGHIJK
LMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{}~'
```

We've just seen your excellent ad for miniature zebras in a recent back issue of Times. What is the price of these items for quantities of more than one gross?

Interface timing

The figure below shows the timing for the parallel interface.



Initialization

There are three ways that the printer can be initialized (returned to a fixed set of conditions).

- | | |
|-------------------------|--|
| Hardware initialization | <ul style="list-style-type: none"> • When the power is turned on • When the printer receives an INIT signal at the parallel interface (pin 31 goes LOW). |
| Software initialization | <ul style="list-style-type: none"> • Software sends the ESC @ (initialize the printer) command. |

Epson Extended Graphics Character Table

CODE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p	ç	é	á	í	l	ú	ñ	æ	é	
1	!	1	A	Q	a	q	ü	æ	i	í	l	ú	ñ	æ	é	
2	"	2	B	R	b	r	é	ó	í	í	t	ú	ñ	é	é	
3	#	3	C	S	c	s	á	ô	ú	í	t	ú	ñ	é	é	
4	\$	4	D	T	d	t	ä	ö	ñ	í	-	é	é	é	é	
5	%	5	E	U	e	u	à	ò	ñ	í	+	f	ó	j	ó	
6	&	6	F	V	f	v	â	û	á	í	+	p	ú	÷	ú	
7	'	7	G	W	g	w	ô	û	ó	í	+	t	í	~	í	
8	(	8	H	X	h	x	ë	ÿ	í	í	+	+	ø	°	°
9	)	9	I	Y	i	y	è	ö	í	í	+	í	í	•	•
A	*	:	J	Z	j	z	é	ö	í	í	+	í	í	·	·	
B	+	;	K	{	k	{	í	ó	í	í	+	í	í	í	í	
C	,	<	L	\	l	\	í	í	í	í	+	í	í	í	í	
D	-	=	M	]	m	}	í	í	í	í	=	í	í	í	í
E	.	>	N	^	n	~	í	í	í	í	<	í	í	í	í	
F	/	?	O	_	o		á	í	í	í	í	í	í	í	í	

Italic Character Table

CODE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p					0	@	P	`	p	
1	!	1	A	Q	a	q		!	1	A	Q	a	q		!	
2	"	2	B	R	b	r		"	2	B	R	b	r		"	
3	#	3	C	S	c	s		#	3	C	S	c	s		#	
4	\$	4	D	T	d	t		\$	4	D	T	d	t		\$	
5	%	5	E	U	e	u		%	5	E	U	e	u		%	
6	&	6	F	V	f	v		&	6	F	V	f	v		&	
7	'	7	G	W	g	w		'	7	G	W	g	w		'	
8	(	8	H	X	h	x		(	8	H	X	h	x		(
9	)	9	I	Y	i	y		)	9	I	Y	i	y)	
A	*	:	J	Z	j	z		*	:	J	Z	j	z		*	
B	+	;	K	{	k	{		+	;	K	{	k	{		+	
C	,	<	L	\	l	\		,	<	L	\	l	\		,	
D	-	=	M	]	m	}		-	=	M	]	m	}		-
E	.	>	N	^	n	~		.	>	N	^	n	~		.	
F	/	?	O	_	o			/	?	O	_	o			/	

Default Settings

The table below shows the default conditions that become valid when the printer is initialized.

Item	Reset to:
Top of form position	Current paper position
Left and right margins	Cancelled
Line spacing	1/6-inch line spacing
Vertical tab position	Cleared
Horizontal tab positions	Every eight characters
VFU channel	Channel 0
Font selection	Reset to the current SelectType setting
CPI	Reset to the current SelectType setting
Justification	Left justification
Special printing effects	Cancelled

In addition, the data buffer is cleared when the printer is initialized by turning on the power or by an INIT signal.

Note: The user-defined character set is not cleared when the printer is initialized.

DIP Switch Functions

The tables below describe the DIP switch functions. The page numbers refer you to the page on which each printer feature is described. The shaded settings are the preset factory settings.

DIP Switch I

SW	Description	ON	OFF	Page
1-1	Default character set	User-defined	ROM	3-7
1-2	Zero character	Slashed	Not slashed	3-7
1-3	Character table	Graphic	Italic	3-7
1-4	Printer mode	IBM emulation	Epson ESC/P	3-8
1-5	Short tear-off mode	OFF	ON	3-8, 2-15
1-6				
1-7	International character set	See table below		3-9
1-8				

DIP Switch 2

SW	Description	ON	OFF	Page
2-1	Page length	12 inch	11 inch	3-9
2-2	Cut sheet feeder	On	Off	3-10
2-3	1-inch skip over perforation	On	Off	3-10
2-4	Automatic line feed	On	Off	3-10

International character sets

Country	SW1-6	SW1-7	SW1-8
USA	On	On	On
France	On	On	Off
Germany	On	Off	On
UK	On	Off	Off
Denmark	Off	On	On
Sweden	Off	On	Off
Italy	Off	Off	On
Spain	Off	Off	Off

International Character Sets

Selecting an international character set provides you with the characters used in other languages. To obtain the desired international character set, set switches 1-6, 1-7, and 1-8 according to the DIP switch table on page 3-7. The following table shows the characters that differ in each international character set.

International character sets

	35	36	64	91	92	93	94	96	123	124	125	126
0 USA	#	\$	@	[\]	^	.	{	:	}	~
1 France	#	\$	à	ç	š	ç	é	ù	ë	è	..	
2 Germany	#	\$	ß	ä	ö	ü	^	.	ä	ö	ü	ß
3 UK	£	\$	@	[\]	-	.	{	:	}	~
4 Denmark I	#	\$	@	æ	ø	å	^	.	æ	ø	å	~
5 Sweden	#	¤	é	ä	ö	å	ú	é	ä	ö	å	ü
6 Italy	#	\$	@	-	\	é	^	ù	à	ò	è	i
7 Spain I	Pt	\$	@	i	N	ñ	^	.	í	ñ	ó	ú
8 Japan	#	\$	@	[¥]	^	.	{	:	}	~
9 Norway	#	¤	é	æ	ø	å	ú	é	æ	ø	å	ü
10 Denmark II	#	\$	é	æ	ø	å	ú	é	æ	ø	å	ü
11 Spain II	#	\$	á	í	N	ñ	é	.	í	ñ	ó	ú
12 Latin America	#	\$	á	í	N	ñ	é	ü	í	ñ	ó	ú

The countries numbered 8 through 12 are available only through the ESC R software command. See the Command Summary in Chapter 8. Also, in IBM emulation mode (DIP switch 1-4 on), a character set containing international characters (CG character table 2) is selected whenever any one of DIP switches 14, 1-7, or 1-8 is set to off. If all three switches are on, CG character table 1 is selected. See Appendix B.

Page length

When DIP switch 2-1 is on, the page length is set to 12 inches. When it is off, the page length is 11 inches. Other page lengths can be set with the ESC C and ESC C0 commands. See the Command Summary in Chapter 8.

Cut sheet feeder mode

When DIP switch 2-2 is on, you can use your printer's optional cut sheet feeder. See Chapter 7 for more information on using a cut sheet feeder with your printer.

Skip over perforation

When DIP switch 2-3 is on, a one-inch margin is provided between the last line printed on one page and the first line printed on the next page. When using continuous paper, this feature causes the printer to stop printing, skip over the perforation, and then resume printing. If you adjust your loading position correctly, you can get half of the margin at the bottom of one page and half at the top of the next page. See the section on adjusting the loading position later in this chapter.

Note: Most application programs take care of the top and bottom margins. Only use skip over perforation if your program does not provide these margins

Automatic line feed

When DIP switch 2-4 is on, a carriage return code (CR!) causes an automatic line feed. When it is off, line feeds occur only when the printer receives line feed codes (LF). Since some computers and application programs automatically add line feeds to carriage returns, the setting you use depends on your computer and application program.

Default character set

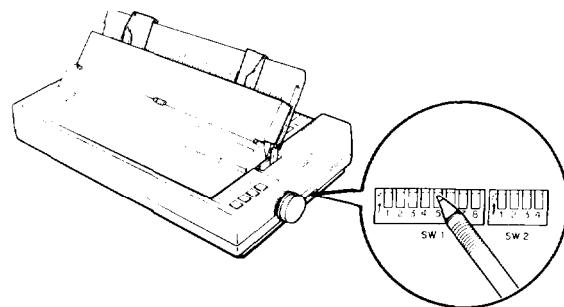
When DIP switch 1-1 is on, the user-defined character set is the default. User-defined characters are maintained in printer memory even when the power is turned off, so the user-defined character set can be selected simply by setting this switch to on. However, when this switch is on, new user-defined characters cannot be defined. See Chapter 4 for more information on user-defined characters. This switch is effective only in the Epson ESC/P mode.

Zero character

When DIP switch 1-2 is on, the printer prints slashed zeroes (0). When the DIP switch is off, the printer prints open zeroes (0). This is useful for clearly distinguishing between uppercase O and zero when printing such items as program lists.

Character table

When DIP switch 1-3 is on, the Epson Extended Graphics character table is selected. When it is off, the italics character table is selected. The Epson Extended Graphics character table contains international accented characters, Greek characters, and character graphics for printing lines, corners, and shaded areas. If you have an IBM@ computer or an IBM compatible, select the Epson Extended Graphics table when you wish to print the character graphics as they are displayed on the screen. Since the character table setting affects only half of the character table, you can



still print text if you have selected the Extended Graphics set. Also, you can still print italics if you use the proper software command. If your printer is in IBM emulation mode (DIP switch 1-4 on), the graphics characters are available no matter which character table you select.

FX - 850/1050 DOT - MATRIX PRINTER

The printouts below show which characters are printed in each table.
Italics

"#\$%& ()*+-.0123456789: ;<=>?@ABCDEFGHI
IJKLMNOPQRSTUVWXYZ[]^_ abcdefghijklmnop
qrstuvwxyz[:]

Epson Extended Graphics



Note: You may need to use the ESC 6 command to print some of the Extended Graphics characters. See Appendix 8.

Printer mode

When DIP switch 1-4 is on, the printer operates in the IBM emulation mode. When it is off, the printer operates in the Epson ESC/P mode. In the IBM emulation mode, DIP switch 1-3 controls the automatic carriage return. When switch 1-3 is off, a carriage return is added to each line feed. The functions of DIP switches 1-6, 1-7, and 1-8 are also different when using the printer in the IBM emulation mode.

Software

Now that you've set up and tested the printer, you need to start using it with your application programs.

Most application programs let you specify the type of printer you're using so that the program can take full advantage of the printer's features. Many programs provide an installation or setup procedure that present a list of printers to choose from. If your application program has a printer selection menu, use the instructions below.

Using printer selection menus

If your software has a printer selection menu, simply choose FX-850 or FX-1050. If the menu does not list either of these printers, choose one of the following. They are listed in order of preference.

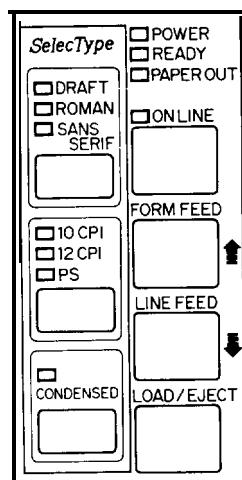
FX-850	FX-1050
FX-86e	FX-286e
EX-800	EX-1000
FX-85	FX-286
FX-80+	FX-185
FX-80	FX-100+
FX	FX-100
LX	FX
MX	LX
Epson printer	MX
Draft printer	Epson printer
	Draft printer

If you plan to use the IBM emulation mode, choose IBM Proprinter (if you have an FX-850), IBM Proprinter XL (if you have an FX-1050), IBM Graphics printer, or IBM printer, in that order of preference.

The Control Panel

The buttons on the control panel let you control many of the printer settings. The control panel also has Indicator lights so you can check the current status of the printer's various settings.

Lights



POWER

On when the power switch is on and power is supplied.

READY

On when the printer is ready to accept input data. Flickers when receiving data.

PAPER OUT

On when the printer is out of paper or when continuous paper is in the standby position.

ON LINE

On when the printer is on line and ready to accept data. This light flashes immediately after you load paper or use short tear-off to indicate that micro-adjustment can be used.

Other control panel features

The control panel of the FX also gives you access to several special functions.

Self test

By holding down the FORM FEED or LINE FEED button while you turn on the printer, you can start the printer's self test. This prints out the DIP switch settings and the characters in the printer's ROM (Read Only Memory). See the section on the self test in Chapter 1 for more information.

Micro-adjustment

By pressing the FORM FEED and LINE FEED buttons immediately after loading paper or using short tear-off, you can make fine adjustments to the loading and short tear-off positions. See the section on micro-adjustment in Chapter 2 for more information.

Data dump

By holding down both the FORM FEED and LINE FEED buttons while you turn on the printer, you can turn on the data dump mode. This feature allows advanced users to diagnose many problems. See the section on the data dump mode in Chapter 6 for more information.

Buttons

ON LINE

This button controls the printer's on line/off line status. When the printer is on line, the printer can receive and print data from the computer.

FORM FEED

When the printer is off line, press this button to eject a single sheet of paper or advance continuous paper to the top of the next page. When the printer is on line, you can use the micro-adjustment feature by pressing this button to advance the paper.

LINE FEED

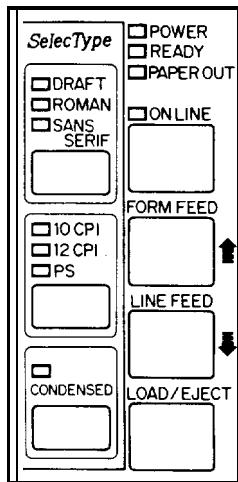
When the printer is off line, press this button to feed the paper one line, or hold it down to feed the paper continuously. When the printer is on line, you can use the micro-adjustment feature by pressing this button to reverse the paper.

LOAD/EJECT

When the printer is off line, press this button to load paper if paper is not loaded, or to eject it if paper is loaded. (Single sheet paper is ejected forward and continuous paper is ejected backward.)

SelectType

The settings you select using the SelectType panel remain valid even after you turn off, reset, or initialize the printer.

**FONT**

Press this button to select draft, near letter quality Roman, or near letter quality Sans Serif. The indicator light shows which font has been selected.

CHARACTERS PER INCH

Press this button to select the characters per inch (cpi). You can choose 10 CPI, 12 CPI, or PS (proportional spacing). The indicator light shows the selected character spacing.

CONDENSED

Press this button to select either condensed or normal printing. The light is on when the printer is in condensed mode. In this mode, all characters are approximately 60% of their normal width.

Note: Proportional spacing and condensed mode cannot be combined. If you select both, only proportional spacing works.

11	29	BUSY	OUT	A HIGH signal indicates that the printer cannot receive data. The signal goes HIGH in the following cases: 1) During data entry (e.g. char. time) 2) During printing 3) When off line 4) During printer-error state.
12	30	PE	OUT	A HIGH signal indicates that the printer is out of paper.
13	—	—	—	Pulled up to 5 volts through 3.3K ohm resistance.
14	—	AUTO FEED XT	IN	When this signal is LOW, the paper is automatically fed 1 line after printing. (The signal level can be fixed to this by setting DIP switch 2-4 to ON.)
15	—	NC	—	Not used.
16	—	GND	—	Logic ground level.
17	—	CHASSIS GND	—	Printer's chassis ground, which is isolated from the logic ground.
18	—	NC	—	Not used.
19 - 30	—	GND	—	Twisted-pair return signal ground level.
31	—	INIT	IN	When this level becomes LOW, the printer controller is reset to its power-up state and the print buffer is cleared. This level is usually HIGH. Its pulse width must be more than 50 microseconds at the receiving terminal.
32	—	ERROR	OUT	This level becomes LOW when the printer is: 1) in paper-out state 2) off line 3) in error state.
33	—	GND	—	Same as for Pins 19 - 30.
34	—	NC	—	Not used.
35	—	—	—	Pulled up to 5V through 3.3K ohm resistance.
36	—	SLCT IN	IN	The DC1/DC3 code is valid only when this signal is "HIGH". (Internal fixing can be carried out with Jumper J1. The level of this signal is factory-set to "LOW".)

Interface Specifications

Your printer is equipped with an 8-bit parallel interface. For specifications for optional interfaces, see the manuals provided with the optional interfaces.

Pin assignments for the parallel interface

Connector pin assignments and a description of their respective interface signals are shown in the following table.

Signal Pin	Return Pin	Signal	Direction	Description
1	19	STROBE	IN	STROBE pulse to read data in. Pulse width must be more than 0.5 microseconds at the receiving terminal
2	20	DATA 1	IN	
3	21	DATA 2	IN	
4	22	DATA 3	IN	
5	23	DATA 4	IN	
6	24	DATA 5	IN	
7	25	DATA 6	IN	
8	26	DATA 7	IN	
9	27	DATA 8	IN	
10	28	ACKNLG	OUT	About a 12-microsecond pulse LOW indicates that data has been received and that the printer is ready to accept more data

- The column heading "Direction" refers to the direction of signal flow as viewed from the printer.
- "Return" denotes the twisted-pair return, to be connected at signal ground level. For the interface wiring, be sure to use a twisted-pair cable for each signal and to complete the connection on the return side. These cables should be shielded and connected to the chassis of the host computer and the printer.
- All interface conditions are based on TTL level. Both the rise and the fall times of each signal must be less than 0.2 microseconds.
- Data transfer must be carried out by observing the ACKNLG or BUSY signal. Data transfer to this printer can be carried out only after receipt of the ACKNLG signal or when the level of the BUSY signal is LOW.

Printing enabled/disabled signals and control conditions

The following table shows the relationship between printing being enabled or disabled, the on line/off line status, and the receipt of the data on/off control characters, DC1 or DC3.

ON LINE (Indicator)	SLCT IN	DC1/DC3 (on/off control)	ERROR	BUSY	ACKNLG	Printing (Disabled/Enabled*)
on line	Low (J1/interf)	DC1/DC3 (no effect)	High	High/Low	Pulsed ea. char.	Enabled (normal cond.)
on line	High	DC1 Recv'd	High	High/Low	Pulsed ea. char.	Enabled
on line	High	DC3 Recv'd	High	High/Low	Pulsed ea. char.	Disabled'
off line	High/Low (no effect)	DC1/DC3 (no effect)	Low	High	Not generated	Disabled

*While printing is disabled, character data is being received and acknowledged so that the printer can look for another DC1 character, which would allow it to resume printing.

Commands in Numerical Order

This section lists all the FX commands, with their decimal and hexadecimal values. The numbers in the columns on the right are the page numbers in this chapter where a complete description of the command can be found. If the Epson and IBM emulation mode page numbers are the same, the command is the same in both modes and is described only in the Epson mode section.

ASCII	Decimal	Hexadecimal	Description	Epson Mode	IBM Emulation Mode
BEL	7	07	Beeper	8-12	8-12
BS	8	08	Backspace	8-20	8-20
HT	9	09	Tab horizontally	8-22	8-22
LF	10	0A	Line feed	8-15	8-15
VT	11	0B	Tab vertically	8-18	8-18
FF	12	0C	Form feed	8-14	8-14
CR	13	0D	Carriage return	8-13	8-13
SO	14	0E	Select double-wide (1 line)	8-27	8-27
SI	15	0F	Select condensed mode	8-26	8-26
DC1	17	11	Select printer	8-8	8-8
DC2	18	12	Cancel condensed mode	8-26	
DC2	18	12	Cancel condensed/12 cpi prop.	8-47	
DC3	19	13	Deselect printer	8-9	
DC4	20	14	Cancel double-wide (1 line)	8-27	8-27
CAN	24	18	Cancel line	8-13	8-13
DEL	127	7F	Delete character	8-13	
ESC SO	14	0E	Select double-wide (1 line)	8-27	8-27
ESC SI	15	0F	Select condensed mode	8-26	8-26
ESC EM	25	19	Cut sheet feeder on/off	8-11	
ESC SP	32	20	Set intercharacter space	8-32	
ESC !	33	21	Master Select	8-24	
ESC #	35	23	Cancel MSB control	8-12	
ESC \$	36	24	Set absolute print position	8-21	
ESC %	37	25	Select user-defined set	8-36	
ESC &	38	26	Define user-defined characters	8-35	
ESC *	42	2A	Select graphics mode	8-39	
ESC -	45	2D	Turn underlining on/off	8-31	8-31
ESC /	47	2F	Select vertical tab channel	8-19	
ESC 0	48	30	Select 1/&inches; line spacing	8-16	8-16
ESC 1	49	31	Select 7/72-inch line spacing	8-16	8-16
ESC 2	50	32	Select 1/6-inch line spacing	8-16	
ESC 2	50	32	Programmable line spacing	8-43	
ESC 3	51	33	Select n/216-inch line spacing	8-17	8-17
ESC 4	52	34	Select italic mode	8-33	
ESC 4	52	34	Set topof form	8-43	
ESC 5	53	35	Cancel italic mode	8-34	
ESC 5	53	35	Turn automatic line feed on/off	8-44	
ESC 6	54	36	Printable code area expansion	8-36	
ESC 6	54	36	Select international character set	8-49	
ESC 7	55	37	Cancel ESC 6	8-37	
ESC 7	55	37	Select standard character set	8-49	
ESC 8	56	38	Disable paper-out sensor	8-10	
ESC 9	57	39	Enable paper-out sensor	8-10	
ESC :	58	3A	Copy ROM into RAM	8-35	
ESC :	58	3A	Select 12 cpi	8-46	
ESC <	60	3C	Unidirectional mode (1 line)	8-9	
ESC =	61	3D	Set MSB to 0	8-11	
ESC =	61	3D	Define user-defined characters	8-50	
ESC >	62	3E	Set MSB to 1	8-12	
ESC ?	63	3F	Reassign graphics mode	8-40	
ESC @	64	40	Initialize printer	8-8	
ESC A	65	41	Select n/72-inch line spacing	8-17	
ESC A	65	41	Set n/72-inch line spacing	8-42	
ESC B	66	42	Set vertical tabs	8-18	8-18

ESC C	67	43	Set page length in lines	8-14	814
ESC C0	67	43	Set page length in inches	8-14	8-14
ESC D	68	44	Set horizontal tabs	8-22	8-45
ESC E	69	45	Select emphasized mode	8-29	8-29
ESC F	70	46	Cancel emphasized mode	8-29	8-29
ESC G	71	47	Select double-strike mode	8-29	8-29
ESC H	72	48	Cancel double-strike mode	8-30	8-30
ESC I	73	49	Printable code area expansion	8-37	
ESC I	73	49	Select font	8-46	
ESC J	74	4A	Perform n/216-inch line feed	8-17	8-43
ESC K	75	4B	Select single-density graphics	8-38	8-38
ESC L	76	4C	Select double-density graphics	8-38	8-38
ESC M	77	4D	Select 12 cpi	8-25	
ESC N	78	4E	Set skip over perforation	8-15	8-15
ESC O	79	4F	Cancel skip over perforation	8-15	8-15
ESC P	80	50	Select 10 cpi	8-24	
ESC P	80	50	Turn proportional on/off	8-47	
ESC Q	81	51	Set right margin	8-20	
ESC Q3	81	51	Deselect printer (FX-850)	8-42	
ESC Q22	81	51	Deselect printer (FX-1050)	8-42	
ESC R	82	52	International character set	8-34	
ESC R	82	52	Restore default tab settings	8-45	
ESC S0	83	53	Select superscript mode	8-30	8-30
ESC S1	83	53	Select subscript mode	8-30	8-30
ESC T	84	54	Cancel superscript/subscript	8-31	8-31
ESC U	85	55	Turn unidirectional mode on/off	8-10	8-10
ESC W	87	57	Turn double-wide on/off	8-28	8-28
ESC X	88	58	Set left and right margins	8-44	
ESC Y	89	59	High-speed dbl-density graphics	8-38	8-38
ESC Z	90	5A	Quadruple-density graphics	8-39	8-39
ESC I@	91	5B	Double-high double-wide on/off	8-48	
ESC \	92	5C	Select relative position	8-21	
ESC \	92	5C	Print characters from symbol set	8-49	
ESC ^	94	5E	Select 9-pin graphics	8-40	
ESC ^	94	5E	Print 1 char. from symbol set	8-50	
ESC _	95	5F	Turn overscore on/off	8-48	
ESC a	97	61	Select justification	8-32	
ESC b	98	62	Set vertical tabs in channels	8-18	
ESC k	107	6B	Select NLQ font	8-23	
ESC l	108	6C	Set left margin	8-19	
ESC p	112	70	Turn proportional mode on/off	8-25	
ESC s	115	73	Turn half-speed mode on/off	8-9	
ESC t	116	74	Select character table	8-33	
ESC w	119	77	Turn double-high on/off	8-28	
ESC x	120	78	Select NLQ or draft	8-23	

Installation/Support Tips

Software

The type of printer installed on your system must be identified for each software package. This is usually done through a setup menu. If this printer is not listed in your program, look in the printer User's Manual for the next-best model selection.

DIP Switch Settings

The default settings will usually work for most applications, but they should be checked before using the printer. This will avoid unexpected results.

Serial Operation

The FX-850/1050 will be able to receive serial data with the addition of an Epson 81XX series interface option.

Cut - Sheet Feeder Operation

The page length will have to be adjusted (shortened) to 61 lines per page if your software does not properly support cut -sheet paper. There will be lines from the first page printed at the top of the second page if the page length is not set correctly.

Disabling the Buffer

An undocumented feature of the FX-850/1050 is the ability to disable the buffer from the SelecType panel. To toggle the buffer hold down the **Load/Eject** switch at power on. Two beeps indicate that the 8K buffer is enabled, and one beep indicates that the buffer is disabled. (Some spooler applications won't work correctly unless the buffer is disabled.)

Information Reference List

Engineering Change Notices

FX-850/1050-001	10/11/88	To Version MP2286 ROM upgrade.
-----------------	----------	-----------------------------------

Product Support Bulletins

P - 0024	8/01/88	Undocumented buffer feature
----------	---------	-----------------------------

Related Documentation

M-TM-FX8510		FX-850/1050 Technical Manual
M-PL-FX8510		FX-850/1050 Parts Price List
Y46199101003		FX-850/1050 User's Manual

Technical Information Bulletins

FX-850/1050-001	7/1/88	Loading lever replacement
FX-850/1050-002	10/11/88	PEGX removal procedure caution